

**PENDING CLAIMS**  
**APPLICATION NO. TBA DOCKET NO. 7853-0224**  
**(As Amended under 37 C.F.R. § 1.111, November 28, 2000)**

1. (Once Amended) A method for identifying an individual having or at risk of developing a bipolar affective disorder or schizophrenia comprising the step of detecting the presence or absence of a *HKNG1* gene product in a patient sample wherein said method comprises the steps of:

- a) incubating a sample in the presence of a detectably labeled antibody capable of identifying the *HKNG* gene product; and
  - b) assaying for the presence or absence of the *HGNG* gene product,
- wherein the presence of a human *HKNG1* gene product indicates that the individual has or is at risk of developing a bipolar affective disorder or schizophrenia.

Claims 2-18 (Canceled)

Claim 19. (New) A method for identifying an individual having or at risk of developing a bipolar affective disorder or schizophrenia comprising the step of detecting the presence or absence of a *HKNG1* gene product in a patient sample wherein said method comprises the steps of:

- a) incubating a sample in the presence of a detectably labeled antibody capable of identifying the *HKNG* gene product; and
  - b) assaying for the presence or absence of the *HGNG* gene product,
- wherein the presence of aberrant level of the human *HKNG1* gene product indicates that the individual has or is at risk of developing a bipolar affective disorder or schizophrenia.

Claim 20. (New) The method according to Claim 1, wherein said assay step comprises an immunoassay.

Claim 21. (New) The method according to Claim 1, w herein said immunoassay is an Elisa.

Claim 22. (New) The method according to Claim 1, wherein said *HGNG* gene product is detected in a blood, serum, lymph or thoracentesis sample.

Claim 23. (New) The method according to Claim 1, wherein said *HGNG* gene product is detected in cerebrospinal fluid.

Claim 24. (New) The method according to Claim 1, wherein said *HGNG* gene product is detected *in situ* in a histological specimen.

Claim 25. (New) The method according to Claim 24, wherein said *HGNG* gene product is detected on the surface of a cell

Claim 26. (New) The method according to Claim 1, wherein said *HKNG* product is a conserved variant or peptide fragment thereof.

Claim 27. (New) The method of Claim 1, wherein said *HKNG* gene product comprises an amino acid sequence which is different from the amino acid sequence depicted in SEQ ID NO:2.

Claim 28. (New) The method of Claim 1, wherein said *HKNG* gene product comprises an amino acid sequence which is different from the amino acid sequence depicted in SEQ ID NO:4.

Claim 29. (New) The method according to Claim 1, wherein said *HKNG* gene product comprises the amino acid sequence encoded by a nucleic acid molecule that hybridizes under highly stringent conditions to the nucleic acid insert of the clone contained in ATCC accession No. 98351, wherein said stringent conditions comprise hybridization in 0.5 M NaHPO<sub>4</sub>, 7% SDS, 1 mM EDTA at 65 °C, and washing in 0.1xSSC/0.1%SDS at 68 °C.

Claim 30. (New) The method of Claim 29, wherein said *HKNG* gene product comprises the amino acid sequence of SEQ ID NO:2 with a substitution of a lysine for a glutamic acid at amino acid residue 202 of SEQ ID NO:2.

Claim 31. (New) The method of Claim 29, wherein said *HKNG* gene product comprises the amino acid sequence of SEQ ID NO:4 with a substitution of a lysine for a glutamic acid at amino acid residue 184 of SEQ ID NO:4.

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